

CLAIMS

1. A code conversion method of receiving a first code string compliant
5 with a first encoding method to convert the first code string into a second code
string compliant with a second encoding method, and to output the same,
characterized by comprising:

10 a first step of generating a first decoded audio from the first code string
in accordance with a first decoding method corresponding to the first encoding
method; and

a second step of judging whether the first decoded audio is an audio
signal or a non-audio signal by using information contained in the first code string,
and encoding the first decoded audio in accordance with the second encoding
method on the basis of the judgment to generate a second code string.

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2. The code conversion method according to claim 1, characterized in
that:

20 the second step includes a step of judging whether the first decoded
signal is the audio signal or the non-audio signal by using one of frame type
information contained in the first code string and a size of the code string.

3. The code conversion method according to claim 1, characterized in
that:

25 the first step includes a step of separating a header containing frame
type information and a payload from the first code string, and a step of decoding
an audio of a code corresponding to an audio parameter, in accordance with the
first decoding method and outputting the decoded audio as a first decoded audio
when the frame type information corresponds to an audio section, and decoding a

noise of a code corresponding to a noise parameter in accordance with the first decoding method and outputting the decoded noise as a first decoded noise when the frame type information corresponds to a non-audio section; and

5 the second step includes a step of executing control based on the frame type information to output the first decoded audio when the frame type information corresponds to the audio section, and to output the first decoded noise when the frame type information corresponds to the non-audio section.

4. The code conversion method according to claim 3, characterized in
10 that the second step further includes a step of encoding the first decoded audio in accordance with the second encoding method to output the same as a second code when the frame type information corresponds to the audio section, a step of encoding the first decoded noise by the second encoding method to output the same as a second code when the frame type information corresponds to the non-
15 audio section, a step of setting the second code obtained by encoding the first decoded audio in accordance with the second encoding method as a payload on the basis of the frame type information when the frame type information corresponds to the audio section, and outputting a second code string obtained by adding a header to the payload from an output terminal, and a step of setting a
20 second code obtained by encoding the first decoded noise by the second encoding method as a payload when the frame type information corresponds to the non-audio section, and outputting a second code string obtained by adding a header to the payload from the output terminal.

25 5. A code conversion device for receiving a first code string compliant with a first encoding method to convert the first code string into a second code string compliant with a second encoding method, and to output the same, characterized by comprising:

an audio decoding circuit for generating a first decoded audio from the first code string in accordance with a first decoding method corresponding to the first encoding method; and

5 an audio encoding circuit for judging whether the first decoded audio is an audio signal or a non-audio signal by using information contained in the first code string, and encoding the first decoded audio in accordance with the second encoding method on the basis of the judgment to generate a second code string.

10 6. The code conversion device according to claim 5, characterized in that whether the first decoded signal is the audio signal or the non-audio signal is judged by using one of frame type information contained in the first code string and a size of the code string.

15 7. The code conversion device according to claim 5, characterized in that:

the audio decoding device includes a header information extraction circuit, an audio decoding circuit, a noise decoding circuit, and a first switch;

20 the header information extraction circuit separates a header containing frame type information and a payload from the first code string, outputs a code corresponding to an audio parameter to the audio decoding circuit when the frame type information corresponds to an audio section, and outputs a code corresponding to a noise parameter to the noise decoding circuit when the frame type information corresponds to a non-audio section;

25 the audio decoding circuit receives a first code output from the header information extraction circuit, decodes an audio from the first code by the first decoding method corresponding to the first encoding method, and outputs the decoded audio as a first decoded audio to the first switch;

the noise decoding circuit receives the first code output from the header information extraction circuit, decodes a noise from the first code by the first decoding method corresponding to the first encoding method, and outputs the decoded noise as a first decoded noise to the first switch; and

5 the first switch receives the frame type information output from the header information extraction circuit, outputs the first decoded audio output from the audio decoding circuit when the frame type information corresponds to the audio section, and outputs the first decoded noise output from the noise decoding circuit when the frame type information corresponds to the non-audio section.

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8. The code conversion device according to claim 7, characterized in that:

the audio encoding device includes a second switch, an audio encoding circuit, a noise encoding circuit, and a header information addition switch;

15 the second switch receives the frame type information output from the header information extraction circuit of the audio decoding device, outputs the first decoded audio output from the first switch to the audio encoding circuit when the frame type information corresponds to the audio section, and outputs the first decoded noise output from the first switch to the noise encoding circuit when the frame type information corresponds to the non-audio section;

20 the audio encoding circuit receives the first decoded audio output from the second switch, encodes the first decoded audio by the second encoding method, and outputs the decoded audio as a second code to the header information addition circuit;

25 the noise encoding circuit receives the first decoded noise output from the second switch, encodes the first decoded noise by the second encoding method, and outputs the decoded noise as a second code to the header information addition circuit; and

the header information addition circuit receives the frame type information output from the header information extraction circuit of the audio decoding device, sets the second code output from the audio encoding circuit as a payload when the frame type information corresponds to the audio section, and outputs a second code string obtained by adding a header to the payload via an output terminal, sets the second code output from the noise encoding circuit as a payload when the frame type information corresponds to the non-audio section, and outputs a second code string obtained by adding a header to the payload via the output terminal.

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9. A code conversion program for use in operating a program-controlled processor device that constitutes a code conversion device responsive to a first code string compliant with a first encoding method so as to convert the first code string into a second code string compliant with a second method, the program making the program-controlled processor device execute the steps of:

(a) processing of generating a first decoded audio from the first code string by a first decoding method; and

(b) processing of judging whether the first decoded audio is an audio signal or a non-audio signal by using information contained in the first code string,

20 and encoding the first decoded audio by the second encoding method based on the judgment to generate a second code string.

10. The code conversion program according to claim 9, making the processor device to execute the processing of judging whether the first decoded audio is the audio signal or the non-audio signal by using one of frame type information contained in the first code string and a size of the code string.

11. A recording medium recording the code conversion program of

claim 9 or 10.

12. A code conversion method for first decoding a first code string containing a header and a payload and encoded according to a first encoding method, and then encoding the code string according to a second encoding method, characterized by judging whether the code string is an audio signal or a non-audio signal based on at least one of the header and the payload of the first code string, decoding the code string based on the judgment, and then encoding the code string according to the second encoding method.

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13. The code conversion method according to claim 12, characterized in that the first encoding method and the second encoding method are different from each other.

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14. The code conversion method according to claim 12, wherein the first encoding method and the second encoding method are identical to each other.